

1. A statement that the proposal is submitted as a value engineering proposal.
 2. A description of the proposal.
 3. An itemization of the Contract requirements that requires a change and a recommendation of how to make each change.
 4. An estimate of the savings that will result from adoption of the proposal.
 5. A prediction of any effects the proposed change will have on other costs.
 6. A statement of the time the Change Order must be issued to obtain maximum cost reduction during the remainder of the Contract, and the reason for the time schedule.
 7. The dates of any previous submissions of the proposals, including Contract numbers and the Department's actions.
 8. A statement of the proposal's effect on the time for Project completion.
- D. The Department will not be liable for any delay in acting upon any proposal submitted. The Engineer's decision to accept any such proposal will be final and will not be subject to Section 104.06. The Engineer may accept, in whole or in part, any cost reduction proposal submitted by issuing a Change Order.
- E. If a cost reduction proposal is accepted, the Contractor and the Department shall share equally in any savings realized. This acceptance will be made according to this Specification or other applicable Contract provisions.
- The Change Order will indicate the changes and accompanying revised costs as proposed by the Contractor and accepted by the Department. The Change Order will also reflect the estimated net savings to the Department after the estimated implementation costs and additional administrative costs incurred as a result of this proposal have been deducted.
- Payment to the Contractor, in addition to the agreed upon revised costs, will be 50% of the net savings as determined above.
- If the proposal results in an increase in cost, this Specification shall not apply. Any increase in costs above the original design shall be at the Contractor's expense.
- F. The Contractor may restrict the Department's right to use or disclose information submitted with a value engineering proposal if the proposal is rejected. Such restriction must be in writing and be submitted with the proposal. If the proposal is accepted, this restriction shall be void and the Department may use, duplicate, or disclose in whole or in part any data necessary to utilize the proposal.

SECTION 105 CONTROL OF WORK

105.01 GENERAL.

The Contractor shall be responsible for the direct supervision of the workers and their methods of workmanship.

The Department will decide all questions regarding the quality and acceptability of materials furnished, work performed, rate of work progress, interpretation of the Contract, and the acceptable fulfillment of the Contract.

105.02 CONTRACTOR REQUIREMENTS.

The Contractor will be supplied with a minimum of 2 sets of approved Plans and Proposal Forms including Special Provisions and have one set available at the work site at all times.

The Contractor shall give the work the constant attention necessary to facilitate progress, and shall provide full cooperation with the Engineer, Inspectors, and other Contractors.

A competent Contractor superintendent capable of reading and understanding the Contract documents and experienced in the type of work required shall be present on the project site at all times, regardless of the amount of work subcontracted. The superintendent shall be the authorized agent of the Contractor and shall have full authority to receive and execute orders or directions of the Engineer or the Department's representative without delay.

105.03 COOPERATION WITH UTILITIES.

The Contractor will notify all utilities to have all necessary adjustments or relocation within or adjacent to the limits of construction made as soon as practicable.

In order to minimize interference with traffic operations, a detailed schedule shall be agreed to prior to beginning work, between the Engineer, utility companies and the Contractor.

These utilities will be relocated or adjusted by and at the owners expense except as otherwise provided for in the Contract.

The Contract will indicate various utility items which are to be relocated or adjusted by the utility owner, and which are to be relocated or adjusted by the Contractor.

When the Contractor is required to move or adjust public utilities which are not provided for in the Contract, payment will be made according to Section 104.03 D.

The Contractor shall make arrangements to protect the properties of railway, telegraph, telephone, utilities, or other property from damage.

The Contractor shall notify the North Dakota One Cell System (1-800-795-0555) prior to the beginning of construction, so they may locate and mark all utilities in the project area. Separate Plans, if any, showing relocation or adjustment work will be made available to the Contractor, upon request to the Engineer. The Contractor shall be responsible for locating NDDOT-owned utilities. Subcutting or scarifying over utility lines may be eliminated if, in the opinion of the Engineer, a hazardous situation exists.

The Contractor shall comply with the provisions of Sections 49-23-02, 49-23-03, 49-23-04, 49-23-05, and 49-23-06 of the North Dakota Century Code in determining the location of underground utilities.

The Contractor shall cooperate with utility owners in removing and rearranging underground or overhead utility lines or facilities to minimize interruption to service and duplication of work by utility owners.

In the event utility services are interrupted as a result of accidental breakage, the Contractor shall promptly notify the proper authority and cooperate with them until service has been restored. Work undertaken around fire hydrants shall not commence until provisions for continued service have been made and approved by the local fire authority.

The Contractor shall prevent damage to pipes, cables, and other underground utilities. Repairs to damaged underground utilities caused by carelessness or omissions by the Contractor shall be corrected at the Contractor's expense.

The damaged facilities shall be restored to a condition similar or equal to that existing before the damage took place. If the Engineer determines that adjustment or relocation of underground facilities is necessary to accommodate construction, necessary arrangements will be made with the owner if such work is not otherwise provided for in the Contract. This does not relieve the Contractor of any liability that may arise under the provisions of the North Dakota Century Code.

105.04 COOPERATION BETWEEN CONTRACTORS.

The Department reserves the right to contract for and perform other or additional work on or near the work covered by the Contract.

When separate Contracts are let within the limits of any one Project, each Contractor shall conduct the work without interfering or hindering the progress or completion of work being performed by other Contractors. Contractors working on the same Project shall cooperate with each other.

Each Contractor involved shall accept all liability, financial or otherwise, in connection with the Contract and save the Department harmless from damages or claims resulting from inconvenience, delay, or loss experienced because of the presence and operations of other Contractors working within the limits of the same Project.

The Contractor shall arrange the work and place and dispose of materials being used without interfering with the operations of other Contractors. The work shall be coordinated with the work and sequence of other Contractors.

In case of unavoidable conflicts, the Engineer will determine the sequence of operations.

105.05 COORDINATION OF PLANS, STANDARD SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS.

The Standard Specifications, Supplemental Specifications, Plans, Special Provisions, and all supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; Supplemental Specifications will govern over Standard Specifications; Plans will govern over Standard Speci-

fications and Supplemental Specifications; and Special Provisions will govern over Standard Specifications, Supplemental Specifications, and Plans. Contract Provisions included in the Proposal Form shall be treated as Special Provisions and shall govern over Standard Specifications, Supplemental Specifications, and Plans.

The Contractor shall not take advantage of any error or omission in the Contract. If an error or omission is discovered, the Engineer shall be immediately notified. The Engineer will make corrections and interpretations necessary for fulfilling the intent of the Contract.

Each bid item listed in the Plans and Proposal is referenced to a Standard Specification Section number; therefore, all of the provisions of that referenced section that are applicable to the proper completion of the bid item are binding upon the Contractor. This includes the requirements found in the "General" paragraphs as well as those specific requirements that are listed thereafter.

All other sections and subsections to which references are made within the text of the specified section will govern the same as if they were a part of that specified section in which the references occur.

All of the provisions of SECTION 100—GENERAL PROVISIONS of the Standard Specifications are applicable to all Contracts and will be enforced.

105.06 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT.

- A. Sufficient resources shall be employed for completing the work in the manner and time required by the Contract.
- B. Any person employed by the Contractor or by any Subcontractor who is intemperate, prejudiced, abusive, or disorderly shall be discharged at the written request of the Engineer and shall not be employed again on the work without the Engineer's approval. Should the Contractor fail to discharge this person or persons, or fails to furnish sufficient personnel for the proper prosecution of the work, the work may be suspended by written notice until such orders are followed.
- C. When the methods and equipment to be used are specified, other methods and equipment shall not be used with authorization of the Engineer. The request shall be in writing and shall include a full description of the methods and equipment proposed and an explanation of reasons for making the change. If approval is given, the Contractor shall be responsible for producing work in conformity with Contract requirements. If the Engineer determines that the work produced does not meet Contract requirements, the Contractor shall discontinue the substitute method or equipment and complete the remaining construction with the specified methods and equipment. Deficient work shall be removed and replaced or repaired to the specified quality, by and at the Contractor's expense. No change will be made in basis of payment for construction items involved, nor in Contract time as a result of authorizing a change in methods or equipment.
- D. Welders on contracts concerning SECTION 616 STRUCTURAL STEEL shall meet the criteria established in AASHTO/AWS D 1.5 Bridge Welding Code, except as noted.

Welders utilized in the completion of all NDDOT contracts other than those falling under SECTION 616 STRUCTURAL STEEL shall meet the criteria established

in “Chapter 4 Qualification, of the American Welding Society AWS D1.1:2000 Structural Welding Code – Steel or most current edition of such Code.

Contracts using Aluminum welding shall meet the criteria established in Chapter 4, Qualification of AWS D1.2 Structural Welding Code – Aluminum or the most current edition of such code.

Welders on all NDDOT contracts must be qualified and certified by established welding accredits as outlined in the Code and test results must be submitted to the Materials and Research Engineer two (2) weeks prior to the welder beginning work on the project. The test results must conform to one of the example forms as provided in AWS D1.1 and must include the welders name, social security number, date tested, certifiers name, certifiers title, firm name and test results. The cost of testing and certification shall be at the Contractor’s expense.

Approval will be for one year from the date of qualification. Approval of the welder’s certification may be requested for additional periods of one year, up to a maximum of 3 one-year extensions, if the welder has been actively engaged at welding in the required positions within the previous 6 months. The Department has the right to require a requalification test at any time.

105.07 CONFORMITY WITH PLANS AND SPECIFICATIONS.

All work performed and materials furnished shall conform to the lines, grades, cross sections, dimensions, and material requirements provided in the Contract.

Materials and workmanship shall be uniform in character and shall conform to the prescribed target value or tolerance range. This tolerance range is to accommodate occasional, unavoidable, and minor variations from the median zone.

If the materials or the finished product does not conform with the Contract, but work has been produced to serve the design purpose, the Engineer will determine to what extent the work will be accepted and remain in place. The Engineer will document the basis of acceptance by Contract modification which will provide for an appropriate adjustment in the Contract price for such work or materials as necessary to conform to this determination.

If there are provisions in the Contract for the acceptance of material or work that is not in full compliance with the minimum requirements stated, the use of pay adjustment factors reflecting the payment to be made for the work or materials will be included in the applicable Section of the Specification.

If the Engineer finds the materials, work performed, or the finished products do not conform with the Contract and results in an inferior or an unsatisfactory product, the work or materials shall be removed, replaced, or corrected by and at the Contractor’s expense.

When the Contract contains the word or phrase “uniform”, “uniformly”, “in a uniform manner”, or equivalent to describe a required result or procedure and no test is specified, the degree of uniformity will be that which is obtained for quality work meeting industry standards.

Unacceptable work resulting from any cause, found to exist before final acceptance of the work, shall be removed and replaced or corrected in an acceptable manner at the Contractor’s expense.

Work completed without authorization beyond the limits of the Contract, or any extra work without authority will not be paid under the provisions of the Contract. This work may be ordered removed or replaced at the Contractor's expense.

If the Contractor fails to comply with any order made under the provisions of this Section, the Engineer has the authority to have unacceptable work remedied, or removed and replaced, and unauthorized work to be removed. The cost of this work will be deducted from any monies due or to become due the Contractor.

105.08 PLANS AND WORK DRAWINGS.

Plans will show the location and details of all structures, lines, grades, and typical cross sections of the roadway.

The Plans will be supplemented by work drawings necessary to adequately control the work. Work drawings for structures, when required by the Plans, shall be submitted and shall consist of details required to control the work and to show details not included in the Plans furnished by the Department. All required work drawings must be approved by the Engineer. This approval shall not relieve the Contractor of any responsibility under the Contract for the successful completion of the work.

The Contract price will include the cost of furnishing all required work drawings.

105.09 AUTHORITY OF THE ENGINEER.

The Engineer has the authority to suspend the work wholly or in part for: 1) the Contractor's failure to carry out Contract provisions; 2) for failure to carry out orders; 3) for periods of unsuitable weather; 4) for conditions considered unsuitable for prosecution of the work; 5) for other conditions or reasons in the public interest; or 6) for other reasons that are mutually agreed on by the parties to the Contract.

As the Department's direct representative, the Field Engineer is delegated authority for immediate charge of engineering details of the construction Project and the administrative responsibilities for the satisfactory completion of the Project. The Field Engineer has authority to reject defective material or work not meeting Contract requirements. The Field Engineer is not authorized to alter or waive provisions of the Contract unless approved by Construction Change Order.

105.10 CONSTRUCTION STAKING.

The Engineer will furnish and set construction stakes and marks establishing lines and grades, and furnish the Contractor with all necessary information relating to them. These stakes and marks shall constitute the field control for the Contractor's use in establishing other necessary controls to perform the work.

The Contractor shall preserve all stakes and marks. Construction stakes or marks that are carelessly or willfully destroyed or disturbed by the Contractor, will be replaced and the costs charged against and deducted from payments due the Contractor.

The Department will be responsible for the accuracy of lines, slopes, grades, and other engineering work performed by the Department under this Section.

Before commencing work, the Contractor shall determine the meaning of all stakes, measurements, and marks.

The Department is not responsible for delays in setting stakes unless the Engineer is provided 14 calendar days notice before beginning work on the Project; and thereafter, 48 hours notice, not including Saturday, Sunday, or Holidays, that stakes are needed.

105.11 DUTIES OF THE INSPECTOR.

Department Inspectors are authorized to inspect all work done and materials furnished. This inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The Inspectors are not authorized to alter or waive Contract provisions, issue instructions contrary to the Contract, or act as foreman for the Contractor.

105.12 INSPECTION OF WORK.

All material, the production of material, and each part or detail of the work is subject to inspection. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as required to make a complete and detailed inspection.

The Contractor shall remove or uncover portions of the work as requested by the Engineer. After examination, the work shall be restored to the standard required by the Contract. If the work is acceptable, the uncovering, removing and restoring will be paid for under Section 104.03 D. If the work is unacceptable, the uncovering, removing, and restoring shall be by and at the Contractor's expense.

Any work performed or materials used without inspection by an authorized Department representative may be ordered removed or uncovered and replaced at the Contractor's expense unless the Department representative failed to inspect after having been given notice that the work was to be performed.

When any unit of government, political subdivision, utility, or railroad corporation is to pay a portion of the cost of the work covered by this Contract, its respective representatives also have the right to inspect the work. This act of inspecting does not make any unit of government, political subdivision, utility, or railroad corporation a party to this Contract, and shall not interfere with the right of either party to the Contract.

105.13 ACCEPTANCE.

- A. **General.** Until final written acceptance of the Project by the Engineer, the Contractor shall be responsible and shall protect the work against damage from all causes, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, or replace all work that is damaged before final acceptance at no additional cost to the Department. Damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, or acts of the public enemy or government authority shall be restored at the Department's expense.

The Contractor shall maintain the work site, and all work performed or completed under the Contract, until the Project is accepted. This maintenance shall be as de-

fined in Section 107.05. If the Contract involves the placement of material or the utilization of a previously constructed subgrade, base course, pavement, or structure, the Contractor shall maintain the previously constructed work during all construction operations. Cost of maintenance work during construction and before the project is accepted shall be incidental to other items of work.

The Contractor shall remedy any improperly performed maintenance within 24 hours after receipt of notice from the Department. If unsatisfactory maintenance is not remedied within 24 hours after receipt of the notice, the Department will proceed to maintain the Project. The entire cost of this maintenance will be deducted from monies due or to become due the Contractor.

During periods that work is suspended for any cause, the Contractor shall be responsible for the Project and shall prevent damage to the Project; provide for drainage; and erect any necessary temporary structures, signs, or other facilities at the Contractor's expense.

- B. **Opening to Traffic.** If the traffic control plan allows sections of the roadway to be closed to traffic, the Engineer may order certain sections of the roadway opened for traffic. Opening these sections does not constitute acceptance of the work or a waiver of any Contract provisions. On those sections opened to traffic, the cost of maintaining the roadway for traffic will be at the Department's expense and the Contractor will be compensated as provided for in Section 104.03 D. Any damage to the highway not attributable to public traffic shall be at the Contractor's expense according to Section 105.13 A.

The Engineer may order all or a portion of the Project open to traffic even though construction falls behind the progress schedule (submitted according to Section 103.02) in completing shoulders, drainage structures, or other features of the work. The Contractor shall not be relieved of liability and responsibility for maintaining the roadway during the period the work is opened before final acceptance. The remaining construction operations shall be conducted with minimum interference to traffic.

- C. **Partial Acceptance.** When a unit or portion of the Project, such as a structure, an interchange, or a section of road or pavement (normally approximately 5 miles) is substantially complete, the Contractor may request final inspection of that unit. If the unit has been substantially completed according to the Contract, the Engineer may relieve the Contractor of further responsibility for that unit. Partial acceptance shall not void or alter any Contract terms.
- D. **Final Acceptance.** Upon receiving notice from the Contractor of Project completion, the Engineer will make final inspection. If the Contract is found to be completed satisfactorily, that inspection will constitute the final inspection and the Contractor will be notified in writing indicating the date on which the Project was inspected and accepted.

If the inspection discloses any unsatisfactory work, the Contractor will be given the necessary instructions for correcting the work. The Contractor shall immediately comply with those instructions. Upon correction of the work, another inspection will be made which will constitute the final inspection. If the inspection discloses that the work has been satisfactorily completed, the Contractor will be notified in writing indicating the date on which the Project was inspected and accepted.

Before final acceptance, the highway, borrow pits, and all areas occupied by the Contractor in connection with the work shall be cleaned of all rubbish, excess materials, temporary structures, and equipment; and all parts of the work shall be left in condition acceptable to the Engineer.

105.14 NO WAIVER OF LEGAL RIGHTS.

Final acceptance shall not prevent the Department from correcting any measurement, estimate, or certificate made before or after completion of the work. The Department shall not be prevented from recovering from the Contractor or Surety, or both, any overpayments made on the Contract. A waiver on the part of the Department of any breach of any part of the Contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the Contract terms, shall be liable for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Department's right under any warranty or guaranty.

105.15 FURNISHING RIGHT OF WAY.

The Department is responsible for securing Rights of Way in advance of construction. Exceptions will be indicated in the Contract.

SECTION 106 CONTROL OF MATERIAL

106.01 GENERAL METHODS OF MATERIALS ACCEPTANCE.

Materials shall meet the quality requirements of the Contract. Materials furnished and used in a completed item of work shall be new and unused.

Materials such as mineral aggregates, bituminous mixtures, and Portland Cement Concrete will be tested and approved as provided in the section of work under which the item is performed. For other materials a "Certificate of Compliance" shall be submitted stating that such materials or assemblies fully comply with the Contract requirements. Each lot or shipment of materials delivered to the work must be accompanied by a "Certificate of Compliance" in which the material is clearly identified. The "Certificate of Compliance" shall be submitted to the Project Engineer and shall provide the following information:

- A. Project number to which the material is consigned.
- B. Name of Contractor to which the material is supplied.
- C. Kind of material supplied.